UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,795	09/06/2003	Ashish Thusoo	O17035722001	7099

23639 7590 02/23/2007		EXAMINER
BINGHAM, MCCUTCHEN LLP		MORRISON, JAY A
THREE EMBARCADERO CENTER		

ART UNIT	PAPER NUMBER
2168	

BINGHAM, MCCUTCHEN LLP
THREE EMBARCADERO CENTER
18 FLOOR
SAN FRANCISCO, CA 94111-4067

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

	Application No.	Applicant(s)
Office Action Summary	10/656,795	THUSOO ET AL.
	Examiner	Art Unit	
	Jay A. Morrison	2168	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>01 December 2006</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>23-68</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>23-68</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>02 April 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Remarks

1.   Claims 23-68 are pending.

Continued Examination Under 37 CFR 1.114

2.   A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/1/06 has been entered.

Claim Rejections - 35 USC § 101

3.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4.   Claims 23-31,38-41, and 43-55 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 23-31 and 38-41 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The cited claims do not produce a

tangible result. Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. See, e.g., Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory. These claims are useful and concrete, but they fail to produce a tangible result because no result is stored to non-volatile media or, for example, reported to a user.

As per claim 43-55, these claims clearly recite a "machine readable medium", which may comprise "acoustic or light waves". However these data signals are not tangible, and cannot tangibly embody a computer program or process since a computer cannot understand/realize (i.e. execute) the computer program or process when embodied on the data signal. Computer program or processes are only realized within the computer when stored in a memory or storage element. Therefore, a data signal does not meet the "useful, concrete, and tangible" requirement as set forth in *State Street*, 149 F.3d at 1373, 47 USPQ2d at 1601-02, and hence claims 25-32 are non statutory under 35 U.S.C. 101.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6.   Claims 23-68 are rejected under 35 U.S.C. 102(e) as being anticipated by Wu et

al. ('Wu' hereinafter) (Publication Number 2004/0066529).

As per claim 23, Wu teaches

"A method of handling document operation requests, the method comprising:"

(see abstract and background)

"receiving a document operation request, the document operation requiring one

or more collection elements of the document to be in a computer-readable memory"

(document elements, paragraph [0100]);

"identifying at least one of the one or more required collection elements for

processing" (document elements required, paragraph [0100]-[0103]);

"determining whether the at least one identified collection element is within a collection partition in the computer-readable memory" (elements in RAM need to be unloaded to make room, paragraph [0100]-[0103]);

"loading the at least one identified collection element into the computer-readable memory based on a result from the act of determining, where the at least one identified collection element is loaded into the computer-readable memory when the at least one identified collection element is not within a collection partition in the computer-readable memory" (reload element, paragraph [0100]-[0103]);

"and executing the document operation" (print, paragraph [0100]).

As per claim 24, Wu teaches

"a collection partition does not exceed a threshold size" (paragraph [0067]).

As per claim 25, Wu teaches

"the threshold size is a factor of the memory size" (paragraph [0079]).

As per claim 26, Wu teaches

"the threshold size is user defined" (paragraph [0030]).

As per claim 27, Wu teaches

"the memory is fixed in size" (paragraph [0079]).

As per claim 28, Wu teaches

"a collection partition is a unit in which data is written to or read from a data

storage device" (paragraph [0100]).

As per claim 29, Wu teaches

"a collection partition comprises collection elements from one collection"

(paragraph [0101]).

As per claim 30, Wu teaches

"a collection partition is a disjoint subset of a collection in the document"

(paragraph [0100]).

As per claim 31, Wu teaches

"loading the at least one identified collection element into memory comprises:

loading the at least one identified collection element into a new collection partition in the

memory when the at least one identified collection element is not within a collection

partition in the memory" (paragraph [0100]).

As per claim 32, Wu teaches

"determining whether the memory is full" (paragraph [0100]-[0103]);

"selecting one or more collection partitions in the memory for removal when the

memory is full" (paragraph [0100]-[0103]);

"propagating one or more changes in each of the one or more selected collection

partitions to one or more data storage devices storing one or more collection elements

in the selected collection partition" (paragraph [0100]-[0103]);

"removing the one or more selected collection partitions from the memory"

(paragraph [0100]-[0103]);

"and updating one or more collection partitions that remain in the memory"

(paragraph [0100]-[0103]).

As per claim 33, Wu teaches

"the memory is full when the memory is above a threshold" (paragraph [0079]).

As per claim 34, Wu teaches

"the threshold is user defined" (paragraph [0030]).

As per claim 35, Wu teaches

"selecting one or more collection partitions in the memory for removal comprises:

selecting one or more least recently used collection partitions in the memory for removal

when the memory is full" (paragraph [0100]).

As per claim 36, Wu teaches

"updating one or more collection partitions comprises: updating metadata corresponding to the one or more collection partitions that remain in the memory" (paragraph [0095]).

As per claim 37, Wu teaches

"the one or more selected collection partitions do not contain any of the one or more required collection elements" (paragraph [0100]-[0103]).

As per claim 38, Wu teaches

"the document operation is a read, update, delete, insert, or create operation" (paragraph [0100]).

As per claim 39, Wu teaches

"the one or more required collection elements are part of one collection" (paragraph [0100]).

As per claim 40, Wu teaches

"determining whether the at least one identified collection element is within a collection partition in the memory comprises: determining whether a collection partition corresponding to the at least one identified collection element has already been loaded into memory" (paragraph [0100]-[0103]).

As per claim 41, Wu teaches

"loading the at least one identified collection element into memory comprises:

loading the corresponding collection partition into memory when the corresponding

collection partition has not already been loaded into memory" (paragraph [0100]-[0103]).

As per claim 42, Wu teaches

"the document is an XML document" (paragraph [0110]).

As per claims 43 and 56,

These claims are respectively rejected on grounds corresponding to the

arguments given above for rejected claim 23 and are similarly rejected.

As per claim 44 and 57,

These claims are respectively rejected on grounds corresponding to the

arguments given above for rejected claim 24 and are similarly rejected.

As per claim 45 and 58,

These claims are respectively rejected on grounds corresponding to the

arguments given above for rejected claim 27 and are similarly rejected.

As per claim 46 and 59,

These claims are respectively rejected on grounds corresponding to the

arguments given above for rejected claim 28 and are similarly rejected.

As per claim 47 and 60,

These claims are respectively rejected on grounds corresponding to the

arguments given above for rejected claim 30 and are similarly rejected.

As per claim 48 and 61,

These claims are respectively rejected on grounds corresponding to the

arguments given above for rejected claim 31 and are similarly rejected.

As per claim 49 and 62,

These claims are respectively rejected on grounds corresponding to the

arguments given above for rejected claim 32 and are similarly rejected.

As per claim 50 and 63,

These claims are respectively rejected on grounds corresponding to the

arguments given above for rejected claims 33-34 and are similarly rejected.

As per claim 51 and 64,

These claims are respectively rejected on grounds corresponding to the

arguments given above for rejected claim 35 and are similarly rejected.

As per claim 52 and 65,

These claims are respectively rejected on grounds corresponding to the

arguments given above for rejected claim 36 and are similarly rejected.

As per claim 53 and 66,

These claims are respectively rejected on grounds corresponding to the arguments given above for rejected claim 38 and are similarly rejected.

As per claim 54 and 67,

These claims are respectively rejected on grounds corresponding to the arguments given above for rejected claim 40 and are similarly rejected.

As per claim 55 and 68,

These claims are respectively rejected on grounds corresponding to the arguments given above for rejected claim 42 and are similarly rejected.

Response to Arguments

7.   Applicant's arguments regarding the 35 U.S.C. 101 rejections, filed 12/1/06 have been fully considered but they are not persuasive.

With respect to claims 23-31 and 38-41, the amendment adding "computer-readable" to memory does not sufficiently differentiate the claimed memory from volatile memory; "computer-readable memory" can be volatile. To make the claims statutory by specifying a certain type of memory, the memory must be some type of non-volatile memory.

With respect to claims 43-55, the amendment specifying "the computer readable medium being a non-volatile medium or a volatile medium" does not overcome the rejection since the specification still specifies "transmission medium" in the specification

and the further limitations could still include "transmission medium" including acoustic or

light waves.

8.   With respect to 35 U.S.C. 102(e) rejections, Applicant's arguments with respect

to claim 23-68 have been considered but are moot in view of the new ground(s) of

rejection.

Conclusion

9.   The prior art made of record, listed on form PTO-892, and not relied upon is

considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Jay A. Morrison whose telephone number is (571) 272-

7112. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Tim Vo can be reached on (571) 272-3642. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

**TIM VO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100**

Jay Morrison   Tim Vo
TC2100   TC2100